ρ_g is the port average gas density and U_g is the port average gas velocity; and

determining for a thickness h of a liquid layer formed on the surface of said fuel;

wherein said port mass flux value and said thickness satisfy the relationship of:

$$G^{1.6} h^{0.6} \geq a_{onset},$$

and] where a_{onset} is the entrainment onset parameter and is given by:

$$a_{onset} = 1.05 \times 10^{-2}[\rho_g^{1.3}/\rho_l^{0.3}][1/(Cf_{ref} C_{Bl})^{0.8}](1/\mu_g)\ \sigma \mu_l^{0.6};$$

where ρ_g is the port average gas density, ρ_l is the liquid density of the propellant, Cf_{ref} is the reference friction coefficient, C_{Bl} is the blowing correction coefficient, and μ_g is the port mean gas viscosity; and

selecting said propellant such that a_{onset} has a value that promotes entrainment of droplets from said liquid layer into said gas stream flowing in said port, where the units of a_{onset} is $[kg^{1.65}/m^{2.3}\text{-}sec^{1.65}]$ $kg^{1.6}/m^{2.6}\text{-}sec^{1.6}$;

15. (Amended) The method of Claim 14 wherein a_{onset} is equal to or less than approximately 0.9 $[kg^{1.65}/m^{2.3}\text{-}sec^{1.65}]$ $kg^{1.6}/m^{2.6}\text{-}sec^{1.6}$.

16. (Unchanged) The method of Claim 14 wherein the propellant is selected from the n-alkane class of hydrocarbons, having the general formula of $C_n H_{2n+2}$ and mixtures thereof, where n is a mean carbon number and is in the range of 15 to 80, and which are solid at room temperature.

17. (Unchanged) The method of Claim 14 wherein the propellant is selected from the group of alkhylnaphthalene compounds, anthracene, and mixtures thereof

18. (Unchanged) The method of Claim 14 wherein the propellant is selected from the group of organic acids having the general formula of $CH_3 (CH_2)_n COOH$ and mixtures thereof, where n is in the range of 8 to 25.

19. (Unchanged) The method of Claim 14 wherein the propellant is selected from